Electronic TUBES

6DT8 - 12DT8

TWIN TRIODE

DESCRIPTION AND RATING

The 6DT8 is a miniature, high-mu, twin triode designed for use as a radio-frequency amplifier or as a combined oscillator and mixer in FM receivers. The incorporation of an internal shield contributes to the stable performance of this tube as a high-frequency amplifier.

Except for heater ratings, the 12DT8 is identical to the 6DT8.

GENERAL

ELECTRICAL

	6DT8	12DT8	
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	6.3	12.6	Volts
Heater Current	0.3	0.15	Amperes
Direct Interelectrode Capacitances, approximate*	Section 1	Section 2	
Grid to Plate	1.6	1.6	μμf
Input	2.7	2.7	μμf
Output	1.6	1.6	μμf
Heater to Cathode	3.0	3.0	μμf
Grounded-Grid Input†		5.3	μμf
Grounded-Grid Output†		2.8	μμf

MECHANICAL

Mounting Position—Any
Envelope—T-6½, Glass
Base—E9-1, Small Button 9-Pin

MAXIMUM RATINGS

DESIGN-CENTER VALUES, EACH SECTION

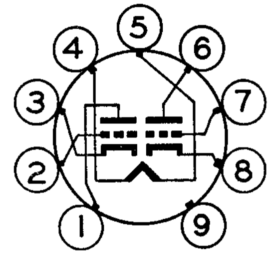
Plate Voltage	300	Volts
Negative DC Grid Voltage	50	Volts
Plate Dissipation	2.5	Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Grid Circuit Resistance		
With Fixed Bias	0.25	Megohms
With Cathode Bias	1.0	Megohms

Design-Center ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under normal conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube in average applications, taking responsibility for normal changes in operating conditions due to rated supply voltage variation (for an alternating-current power source, 117 volts plus or minus 10 percent is accepted USA practice), equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in tube characteristics.

The equipment manufacturer should design so that initially no design-center value for the intended service is exceeded with a bogey tube in equipment operating at the stated normal supply voltage.

BASING DIAGRAM

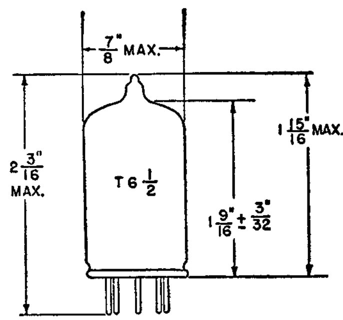


EIA 9DE

TERMINAL CONNECTIONS

Pin 1—Plate (Section 2)
Pin 2—Grid (Section 2)
Pin 3—Cathode (Section 2)
Pin 4—Heater
Pin 5—Heater
Pin 6—Plate (Section 1)
Pin 7—Grid (Section 1)
Pin 8—Cathode (Section 1)
Pin 9—Internal Shield

PHYSICAL DIMENSIONS



EIA 6-2

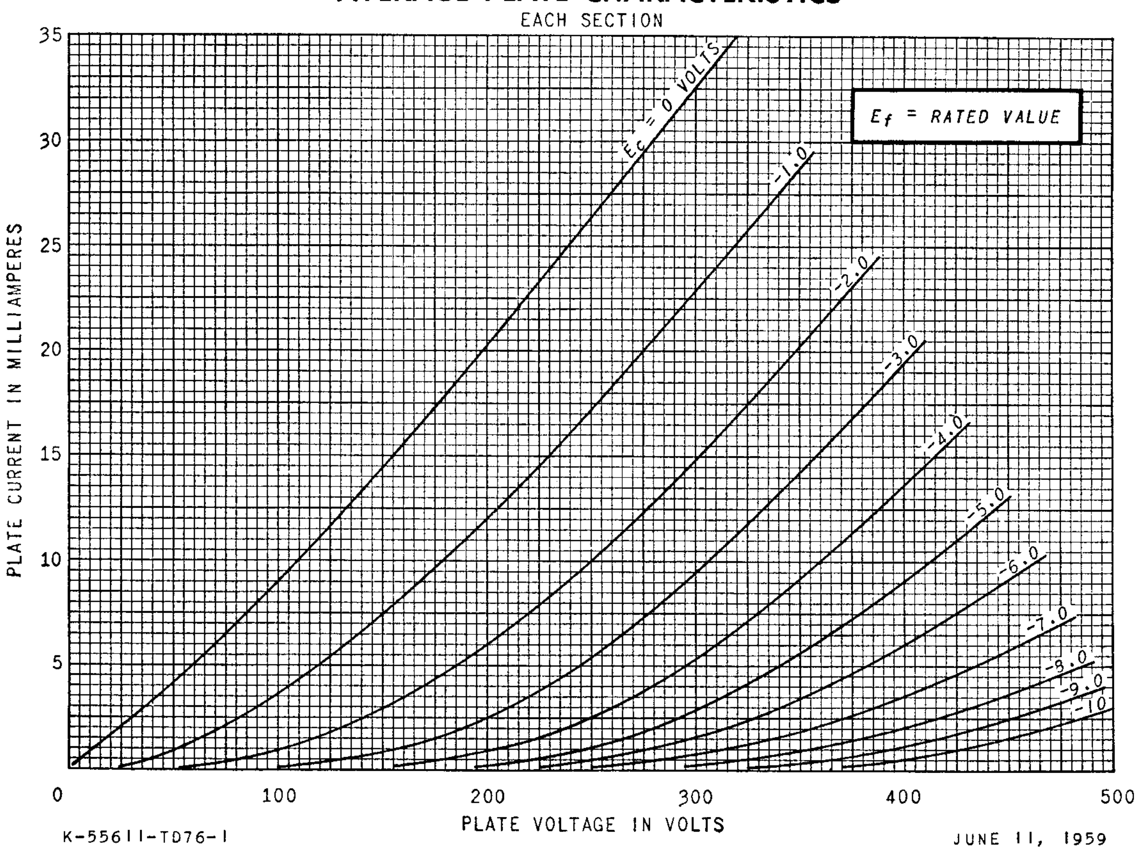
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A_1 AMPLIFIER, EACH SECTION

Plate Voltage	100	250	Volts
Cathode-Bias Resistor	270	200	Ohms
Amplification Factor	60	60	
Plate Resistance, approximate	15000	10900	Ohms
Transconductance	4000	5500	Micromhos
Plate Current	3.7	10	Milliamperes
Grid Voltage, approximate			
Ib = 10 Microamperes	−5	−12	Volts

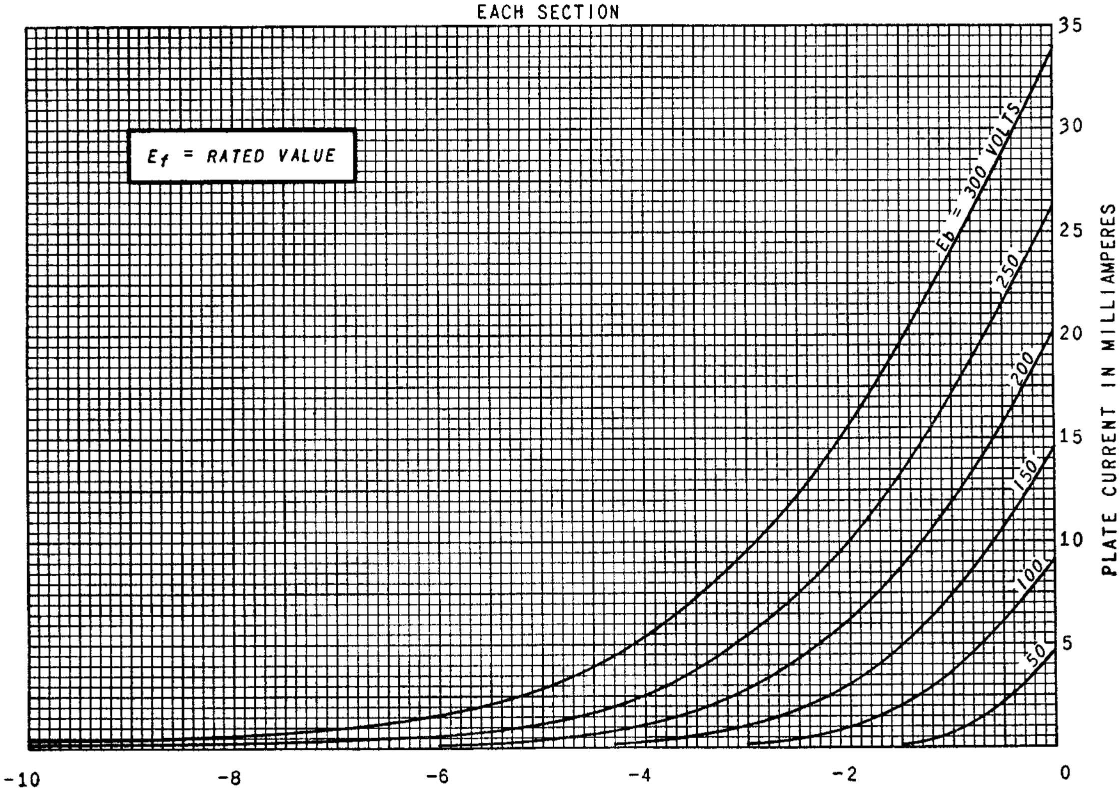
* With external shield (EIA 315) connected to cathode of section under test unless otherwise indicated.
† With external shield (EIA 315) connected to grid.

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

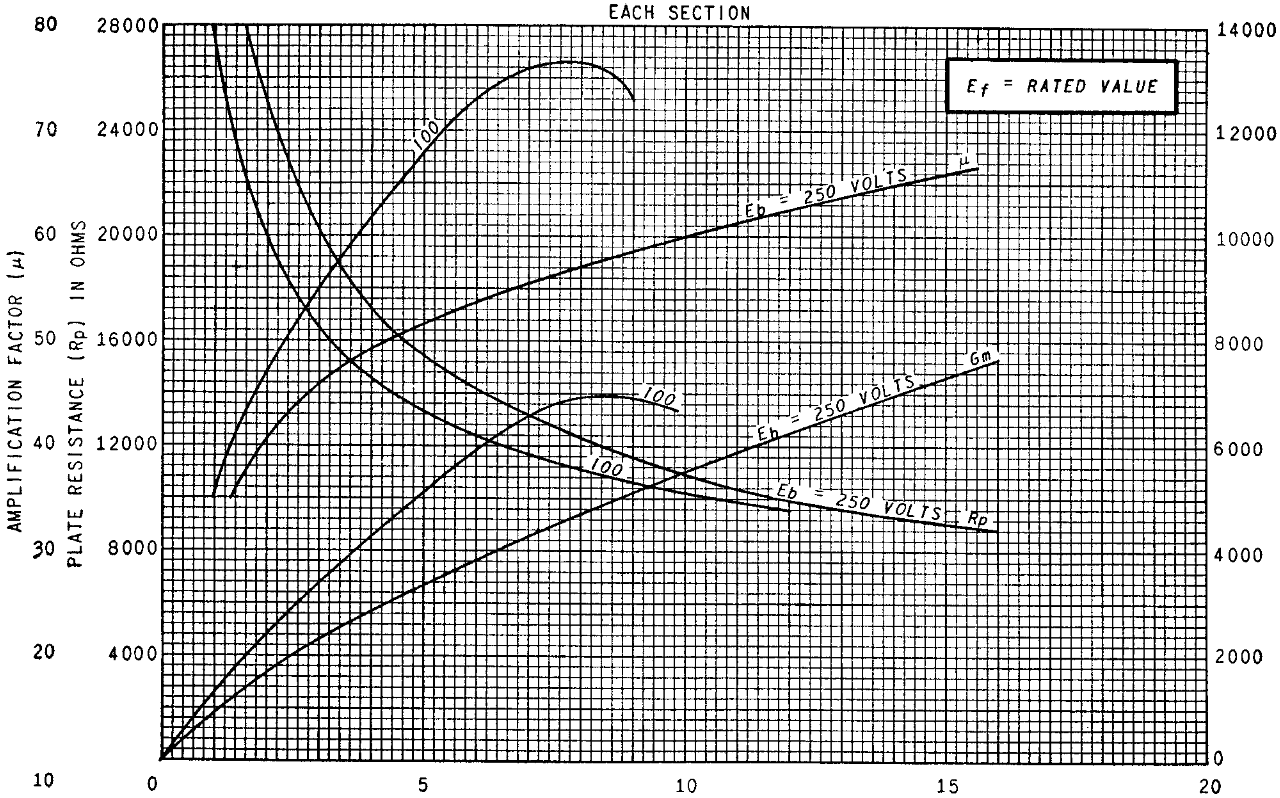
EACH SECTION



K-55611-TD76-2 JUNE 11, 1959

AVERAGE CHARACTERISTICS

EACH SECTION



K-55611-TD76-3 JUNE 11, 1959